Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently Amended) Method to kill breast cancer cells ~~or other carcinoma cells~~ expressing ~~the same target~~ EGP2 and MUC1 antigens in a cell population selected from the group consisting of cells comprising nucleated cells in peripheral blood and bone marrow cells comprising CD-34$^+$ cells selected from the above nucleated cells, the method comprising: incubating the cell population with a combination of two or more immunotoxins, wherein each immunotoxin comprises a conjugate between an antibody or antigen binding ~~antibody~~ fragments thereof and a cell toxin or active toxin fragments, or a recombinantly produced antibody or antigen binding ~~antibody~~ fragments thereof, ~~and~~ further comprising toxins or active toxin fragments, wherein the antibodies or antigen binding ~~antibody~~ fragments thereof are directed to epitopes on the antigen EGP2 expressed by the gene GA733-2 and to epitopes on the antigen expressed by the MUC1 gene and the toxin is Pseudomonas exotoxin A, wherein the antibodies are selected from the group consisting of MOC31, BM2, antibodies binding to the same epitopes as MOC31 or BM2, or antigen binding fragments thereof.

2. (Cancelled)

3. (Previously presented) The method according to claim 1, wherein the antibodies are MOC31 and BM2, or antigen binding fragments thereof.

4-5. (Cancelled)

6. (Previously presented) The method according to claim 1 wherein said incubating consists of administering the immunotoxins in vivo.

7. (Previously presented) The method according to claim 6, wherein the immunotoxins are administered systemically.

8. (Currently amended) The method according to claim 6, wherein the immunotoxins are administered directly into a tumor or intrapleurally ~~of~~ or intra-abdominally.

9-12. (Cancelled)

13. (Previously presented) The method of claim 1, wherein said incubating consists of administering the immunotoxins *ex vivo*.

14. (Currently Amended) A method for killing breast cancer cells ~~or other carcinoma cells~~ expressing ~~the same~~EGP2 and MUC1 antigens in a cell population comprising nucleated peripheral blood cells or bone marrow cells, the method comprising

obtaining the population of cells that contains the breast cancer cells ~~or other carcinoma cells expressing the same antigens~~;

contacting the population of cells *ex vivo* with two or more immunotoxins, wherein a first immunotoxin comprises a PE molecule conjugated to an antibody or an antibody fragment capable of binding an EGP2 antigen which is expressed by a GA733-2 gene and a second immunotoxin comprising a PE molecule conjugated to an antibody or an antibody fragment capable of binding an antigen encoded by the MUC1~~, MUC2, or MUC3~~ gene,

wherein the first immunotoxin comprises a PE molecule conjugated to a MOC31 antibody, an antibody binding to the same epitope as MOC31, or an antigen-binding ~~antibody~~ fragment thereof, and the second immunotoxin comprises a PE molecule conjugated to a BM2 antibody, an antibody binding to the same epitope as BM2, or an antigen-binding ~~antibody~~ fragment thereof.

15. (Previously presented) The method according to claim 14, wherein the first immunotoxin comprises a PE molecule conjugated to a MOC31 antibody or an antigen-binding

antibody fragment thereof, and the second immunotoxin comprises a PE molecule conjugated to a BM2 antibody or an antigen-binding antibody fragment thereof.

16. (Previously presented) The method according to claim 15, wherein the cell population is obtained from a cancer patient.

17. (Cancelled)

18. (Previously presented) The method according to claim 15, wherein the cell population comprises CD34+ cells

19. (Previously Presented) The method according to claim 18, wherein the cell population is enriched or positively selected for CD34+ cells.

20. (Currently amended) The method according to claim 1 wherein treatment of the cell population with the two or more immunotoxins causes toxicity to breast cancer ~~or carcinoma~~ cells and is not toxic to CD34+ cells in the population.

21. (Currently Amended) A method for killing breast cancer cells ~~or other carcinoma cells~~ expressing ~~the same~~ EGP2 and MUC1 antigens in a patient, the method comprising

administering to the patient a therapeutically effective amount of two or more immunotoxins, wherein a first immunotoxin comprises a PE molecule conjugated to an antibody or an antibody fragment capable of binding an EGP2 antigen which is expressed by a GA733-2 gene and a second immunotoxin comprises a PE molecule conjugated to an antibody or an antibody fragment capable of binding an antigen encoded by the MUC1~~, MUC2, or MUC3~~ genes,

wherein the first immunotoxin comprises a PE molecule conjugated to a MOC31 antibody, an antibody binding to the same epitope as MOC31, or an antigen-binding ~~antibody~~ fragment thereof, and the second immunotoxin comprises a PE molecule conjugated to a BM2 antibody, an antibody binding to the same epitope as BM2, or an antigen-binding ~~antibody~~ fragment thereof.

22. (Cancelled)

23. (Cancelled) ~~The method according to claim 21, wherein the malignant cells are carcinomas.~~

24. (Cancelled)

25. (Previously presented) The method according to claim 7, wherein the immunotoxins are administered systemically to kill malignant cells.

26. (Previously presented) The method according to claim 25, wherein the malignant cells have spread to blood or bone marrow.

27. (Cancelled)

28. (Cancelled)

29. (Previoiusly presented) Method to kill breast cancer cells or other carcinoma cells expressing ~~the same target~~ EGP2 and MUC1 antigens in a cell population selected from the group consisting of cells comprising nucleated cells in peripheral blood and bone marrow cells comprising CD-34$^+$ cells selected from the above nucleated cells, the method comprising:

incubating the cell population with a combination of two or more immunotoxins, wherein each immunotoxin comprises a conjugate between an antibody or antigen binding ~~antibody~~ fragments thereof and a cell toxin or active toxin fragments, or a recombinantly produced antibody or antigen binding ~~antibody~~ fragments thereof, ~~and~~ further comprising toxins or active toxin fragments, wherein the antibodies or antigen binding ~~antibody~~ fragments thereof are directed to epitopes on the antigen EGP2 expressed by the gene GA733-2 and to epitopes on the antigen expressed by the MUC1 gene and the toxin is Pseudomonas exotoxin A, wherein the antibodies are selected from the group consisting of MOC31, BM7, antibodies binding to the same epitopes as MOC31 or BM7, or antigen binding fragments thereof.

30. (Currently amended) A method for killing breast cancer cells ~~or other carcinoma cells~~ expressing ~~the same~~ EGP2 and MUC1 antigens in a cell population comprising nucleated peripheral blood cells or bone marrow cells, the method comprising

obtaining the population of cells that contains the breast cancer cells ~~or other carcinoma cells expressing the same antigens~~;

contacting the population of cells *ex vivo* with two or more immunotoxins, wherein a first immunotoxin comprises a PE molecule conjugated to an antibody or an antibody fragment capable of binding an EGP2 antigen which is expressed by a GA733-2 gene and a second immunotoxin comprising a PE molecule conjugated to an antibody or an antibody fragment capable of binding an antigen encoded by the MUC1 ~~, MUC2, or MUC3~~ gene,

wherein the first immunotoxin comprises a PE molecule conjugated to a MOC31 antibody, an antibody binding to the same epitope as MOC31, or an antigen-binding ~~antibody~~ fragment thereof, and the second immunotoxin comprises a PE molecule conjugated to a BM7 antibody, an antibody binding to the same epitope as BM7, or an antigen-binding ~~antibody~~ fragment thereof.

31. (New) The method according to claim 29, wherein the antibodies are MOC31 and BM7, or antigen binding fragments thereof.

32. (New) The method according to claim 30, wherein the first immunotoxin comprises a PE molecule conjugated to a MOC31 antibody or an antigen-binding ~~antibody~~ fragment thereof, and the second immunotoxin comprises a PE molecule conjugated to a BM7 antibody or an antigen-binding ~~antibody~~ fragment thereof.